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ACTUARIAL STUDY NO. 86

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Social Security Administration
Office of the Actuary

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by Steven F. McKay, F.S.A. and Bruce D. Schobel, F.S.A.

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A. Introduction

Several different basic computation methods are now used to determine monthly cash benefit amounts under Social Security. The applicability of a particular method depends on circumstances such as a worker's earnings history and year of birth. In general, a worker (and any other eligible family members) receives the benefits computed by the method that gives the largest amount. This study examines how frequently the different calculation methods are used, and how this usage is expected to change in the future under the Social Security Amendments of 1977.[1/]

The basic method for computing the Primary Insurance Amount for a worker initially eligible after 1978 is known as the wage-indexed method. For some years to come, however, two other basic methods will remain in use for many workers. These are the PIA table method, which was the basic method in the law which applied before 1979, and the old-start method, which still applies to a few workers with covered earnings before 1951.

Two minimum-benefit calculation methods may apply to some workers. The regular-minimum provision simply increases the PIAs produced by the basic methods to a minimum level for workers whose average credited earnings under Social Security are low. The special-minimum provision raises benefits for low-paid workers with a long history of covered earnings.

Finally, two additional calculation methods provide for a relatively smooth transition in certain cases. The transitional-guarantee method applies to workers becoming newly eligible during the transition from the old-law PIA table method to the wage-indexed formula. The disability-benefit guarantee applies to cases where disability payments were terminated because of recovery and guarantees that the new PIA will be at a level no lower than it had been previously, in some cases, or than it would have been without interruption, in other cases.

Section B presents detailed descriptions of the benefit computation methods mentioned above. A reader uninterested in the details of these methods may omit that section; a reader interested in more detailed descriptions, as well as examples of benefit calculations under these methods, should see Actuarial Note No. 100, Computing a Social Security Benefit After the 1977 Amendments, by Steven F. McKay. Section C presents an analysis of the proportions of beneficiaries awarded benefits under the various computation procedures permitted for several recent years. The remaining sections consider a number of additional subjects dealing with benefit computations; the reader who is interested in a particular subject need not read each section consecutively, but rather can consider only the section dealing with the subject of interest.

1/ Public Law 95-216

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Section D presents the amounts of the regular-minimum benefit for various old-age-retirement categories in certain past and future years. Section E shows the minimum PIA in various future years without regard to the regular-minimum provision (i.e., for a person who has the minimum amount of earnings to be able to qualify for old-age benefits).

Section F indicates how rapidly the transitional-guarantee provision, applicable only to persons attaining age 62 in 1979-83, phases out as compared with the benefit computed under the regular procedures. Section G examines the long-range applicability of the special-minimum provision and indicates that it may eventually completely phase out. Section H similarly describes the phasing-out of the old-start computation method (using earnings back to 1937), and Section I discusses which benefit-computation methods will be applicable in the very long run.

Finally, Section J presents information for persons at various earnings levels who, because of small differences in birthdates, have benefits calculated under different methods, thus creating the so-called "notch" situation -- i.e., the computation of significantly larger benefits for persons who attain age 62 in 1978 (or earlier) than for those who attain age 62 in 1979 (or later) when retirement occurs after age 62.

This study relates to the law as it was at the end of July 1981. At that time, legislation which would make several significant changes in the program was in the final process of enactment (the Omnibus Budget Reconciliation Bill). Included in these changes are the elimination of the regular-minimum benefit and different rounding rules in the various steps of the benefit computations. In this respect, Section E may be of special interest because it shows the effect of eliminating the regular-minimum benefit in the future.

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B. Description of Benefit Calculation Methods

Any benefits payable on the account of a worker who attained age 62, became disabled, or died before 1979 are (and will continue to be) based on the law in effect before the 1977 Amendments. Under those provisions,[2] the first step in the benefit-calculation procedure is the determination of Average Monthly Wage, which is defined as the total earnings in a specified number of highest-earnings years, divided by the number of months in those years. The number of highest years considered is equal to the following: (a) the years after 1950 or the year of attainment of age 21, if later, and (b) before the year of attainment of age 62, the year in which a disability waiting period began, or the year of death, whichever is earliest, (c) minus 5 dropout years (and minus any years in a previous "disability-freeze" period). The number of years considered cannot be less than 2 (nor less than 5 years for retirement cases, except when there has been a "disability-freeze" period). After the AMW is determined, the corresponding Primary Insurance Amount is located in a table which relates AMWs and PIAs, and which is published in May of each year in the Federal Register. The benefit actually payable is derived from the PIA.

The 1977 Amendments included five new benefit calculation methods: the wage-indexed formula; the transitional guarantee; the regular minimum; the 1977 old-start method; and the disability benefit guarantee. More than one of these methods, as well as the special-minimum method described later, may apply to a particular beneficiary. In most such cases, the benefit derived from the largest PIA obtained is payable. Under extremely unusual circumstances, a higher benefit amount may be derived from a lower PIA, in which case the higher benefit amount is payable.

The first step in the calculation of a wage-indexed PIA is the determination of Average Indexed Monthly Earnings.[3] For purposes of this calculation, the earnings in each year after 1950 are multiplied by the ratio of (a) the national average wage in the second year before the year of eligibility to (b) the national average wage in the particular year. The highest indexed earnings in a specified number of years are totalled and are then divided by the number of months in those years. The number of years used is determined in the same manner as for the pre-1977-law calculations described earlier, except that the Social Security Disability Amendments of 1980[4] reduced the number of dropout years (from 5 to as few as none) for those becoming eligible for disabled-worker benefits at ages 46 or under.

2/ Appendix F of the Senate Finance Committee print, The Social Security Act and Related Laws (revised March 1981)
3/ Social Security Act, Section 215(b)(1)
4/ Public Law 96-265

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After the AIME has been determined, a PIA formula is applied. This formula defines the initial PIA as 90% of AIME up to a specified amount, plus 32% of AIME in excess of the first specified amount, but not more than a second specified amount, plus 15% of AIME in excess of the second specified amount. The two specified amounts, called "bend points", were set initially at $180 and $1,085 for those first eligible in 1979, and are changed annually (either increased or decreased) at the same rate as national average wages change.[5/] The initial PIA is increased by any benefit increases which occurred in and after the year of initial eligibility as a result of increases in the Consumer Price Index.[6/] The benefit actually payable is derived from the increased PIA.

The transitional-guarantee provision[7/] applies only to the cohorts of workers attaining age 62 in 1979-83, but only with respect to old-age and survivors benefits. An AMW under the pre-1977 law is calculated, but using only those earnings prior to the year of initial eligibility. That AMW is related to an initial PIA from the benefit table which applied in December 1978. Benefit increases are then applied for the year of eligibility and for subsequent years to get an increased PIA from which the benefit payable is derived. The transitional-guarantee provision generally produces benefit amounts smaller than those which would have been produced under previous law, because earnings in and after the year of initial eligibility are not included in the AMW calculation and because CPI benefit increases after 1978 and before the year of initial eligibility do not apply. Transitional-guarantee benefits, however, are often larger than wage-indexed benefits, as will be seen later.

The regular-minimum provision of the 1977 Amendments requires that the initial PIA can not be lower than $122 (an amount which is not indexed in future years and thus will decline in real terms over time). When all of the other applicable benefit-calculation methods produce initial PIAs lower than $122, the initial PIA is set at $122. This initial PIA is increased by the same CPI benefit increases applicable to wage-indexed PIAs, except that some increases are withheld from regular-minimum beneficiaries.[8/] For old-age beneficiaries, increases in the regular-minimum benefit are not granted until a benefit is payable after application of the earnings test or until attainment of age 65, if earlier -- but not before entitlement, in any case. For widows and widowers, the same increases are withheld, except that increases apply for years in which another survivor (e.g., a child) was entitled.

The 1977 Amendments included an old-start calculation method that is used in cases where a worker had substantial earnings before 1951. The 1950 old-start method required the calculation of an AMW based on the number of years in the period beginning with 1937 or the year of attainment of age 22, if later, and ending with the year before attainment of age 62, the start of a disability waiting period, or death. As with the regular method under the pre-1977 law, the wage-indexed formula, and the transitional guarantee, the 5 lowest years of earnings were excluded, except that the number of years considered could not be less than 2. The simplified old-start method under the 1967 Amendments permitted an approximation to actual annual earnings for 1937-50, for which total earnings are readily available, but for which year-by-year earnings records are not reliable. The old-start method under the 1977 Amendments slightly modified the 1967-Act procedure.

5/ Social Security Act, Section 215(a)(1)(B)
6/ Social Security Act, Section 215(i)(2)(A)(iii)
7/ Social Security Act, Section 215(a)(4)(B)(i)
8/ Social Security Act, Section 215(i)(2)(A)(iv)

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Under the old-start method of the 1977 Amendments, total earnings for 1937-50 are divided by the number of years after the year of attainment of age 20 and before 1951 (but not by less than 1). The result is imputed to each year in the calculation period, unless it is greater than $3,000 (the taxable earnings base in those years). In such cases, $3,000 is imputed to each year beginning with 1950 and working backwards until all earnings are distributed or until 1937 is reached. The earnings imputed to years in the period 1937-50 are then used in the determination of the old-start AMW. For those first eligible after 1978, earnings in and after the year of initial eligibility are excluded from the computation of the AMW (as in the case of the transitional-guarantee method).

The Primary Insurance Benefit is defined as 40% of the first $50 of old-start AMW, plus 10% of any amount in excess of $50, with the total being increased by 1% for each "increment year". Under the simplified old-start method under the 1977 Amendments, the number of increment years is defined as the total earnings in 1937-50, divided by $1,650, ignoring any fraction (with a minimum of 4 and a maximum of 14). The PIB so determined is related to a PIA (from which benefits are derived) by the published AMW-PIA-PIB tables described earlier. For those eligible for benefits prior to 1978, the 1977 simplified old-start method does not apply, and the previous old-start method must be used. For those eligible in 1978, the simplified old-start method is applicable, the AMW-PIA-PIB table for December 1977 is used to determine the PIA, and all subsequent benefit increases are applied. For those eligible after 1978, the table for December 1978 is used to determine the PIA, and benefit increases are applied, as with the transitional guarantee, for years in and after the year of initial eligibility.

The disability-benefit guarantee applies to beneficiaries who had received disabled-worker benefits at some time. In those cases where such benefits were received in any of the previous 12 months, the beneficiary is guaranteed that the new disabled-worker benefit will be at least as large as the previous benefit increased by any subsequent benefit increase.[9/] If more than 12 months have elapsed since the previous entitlement, the new PIA is guaranteed to be at least as large as the previous benefit without the application of any benefit increases which occurred after the previous entitlement ended and before the new entitlement began.[10/]

The special-minimum benefit-calculation method had been available for several years and was increased significantly by the 1977 Amendments, thus becoming more often applicable. Under this method,[11/] the PIA as of January 1979 is equal to $11.50 ($9.00 before the 1977 Amendments) multiplied by "years of coverage" in excess of 10, but not exceeding 30 (i.e., a maximum multiplier of 20 years). For years before 1951, a year of coverage is granted for each full $900 of earnings in 1937-50. For later years, a year of coverage is a year in which the worker earned at least 25% of the taxable earnings base (for years after 1978, the amount refers to the "old-law" base, which disregards the ad hoc increases made by the 1977 Amendments). For months after May 1979, the table of 20 special-minimum PIAs determined for January 1979 (one for each possible number of years of coverage from 11 years to 30 years, inclusive) is increased by subsequent CPI benefit increases. (The procedure followed does not increase the $11.50 figure for 1979 by subsequent benefit increases and then use it as a multiplier. Values produced by the correct procedure differ from those that would be produced by applying increases to the $11.50 figure only because of rounding.)

9/ Social Security Act, Section 215(a)(2)(B)
10/ Social Security Act, Section 215(a)(2)(C)
11/ Social Security Act, Section 215(a)(1)(C)

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C. Applicability of Benefit-Calculation Methods During 1978-81

Table 1 presents the percentage distribution of benefits awarded under the various calculation methods for the years 1978-81. In 1978, nearly all benefits were awarded under the pre-1977 law, because the 1977 Amendments were generally not effective until 1979. The pre-1977 law has continued to apply to a large proportion of old-age retirees since 1978, because many of these retirees were eligible for benefits before 1979. This proportion is higher for males than for females, because males tend to delay retirement longer. In 1982, the percentages of awards under pre-1977 law should decline significantly, because the newer methods will apply to age-65 retirees for the first time.

Among those old-age retirees awarded benefits under the 1977 Amendments, the regular-minimum PIA and 1977 old-start methods have applied to much larger proportions of females than of males. These results reflect the facts that a larger proportion of females have sporadic and low earnings histories and that many women worked full-time during, but not after, World War II. The transitional-guarantee method has not applied and will not apply (as discussed later) to many old-age retirees who become or will become eligible during the guarantee period (1979-83), largely because the CPI benefit increases withheld and the post-eligibility earnings excluded cause the transitional-guarantee PIA to be lower than the wage-indexed PIA in most cases. Eventually, the wage-indexed method will apply to the vast majority of all beneficiary awards.

In disability cases, the year of initial eligibility is usually the year of disability onset (unless the disability begins after the year of attainment of age 62); therefore, the 1977-law methods have applied to a rapidly increasing proportion of disability awards. As with old-age retirees, the regular-minimum PIA and old-start methods have been applicable in disability cases to much larger proportions of females than of males. The transitional-guarantee method is not available in disability cases. The disability guarantee is rarely applicable.

The PIA-table method of the pre-1977 law has applied to a larger proportion of survivor beneficiaries than of any other type, primarily because the newer methods apply only to deaths after 1978 of workers who are under age 62 or who attain age 62 after 1978, and most deaths of insured persons occur after age 62. In addition, a time lag often occurs between a worker's death and the eligibility of a surviving widow or widower. Thus, many of the survivors awarded benefits in recent years were eligible because of deaths before 1979. The transitional-guarantee provision has had little impact on survivor benefits to date, because it can apply only in cases where the worker attains age 62 in 1979-83 and dies in or after the month of attaining age 62. Transitional-guarantee awards to survivors will continue for many years in the future, however, because the survivors of old-age retirees with transitional-guarantee benefits will themselves be awarded such benefits.

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D. Size of Regular-Minimum Benefit in 1979 and Later

Table 2 presents a summary of the wage increases and benefit increases assumed under the four alternative sets of long-range assumptions included in the 1981 OASDI Trustees Report. These assumptions are used to project benefit amounts and the proportions of beneficiary awards under the various calculation methods for future years.

Table 3 presents the minimum PIAs for retirements at various ages in 1979 and later, based on the economic assumptions of alternative II-B of the 1981 Trustees Report. ("Retirement" is defined as initial receipt of benefits, after application of the retirement earnings test.) The regular-minimum PIA is frozen at $122 for age-62 retirees under the 1977 Amendments. Retirees at ages above 62, however, will be entitled to PIAs larger than $122 for many years to come. The regular-minimum benefits for transitional-guarantee cases will be substantially larger, in every year, than for those not eligible for that guarantee. Workers attaining age 62 after 1983 will receive only the frozen $122 minimum PIA, with benefit increases applied only for years at and after retirement. In fact, workers attaining age 65 in 1987 or after and not retiring until that age will have available a regular-minimum PIA of only $122. There is the anomalous situation that workers attaining age 62 in 1984 or after and retiring at that age receive a benefit based on the regular-minimum PIA of $122 and then have the CPI increases thereafter, whereas if they wait until age 65 to retire, they receive only $122. As a result, if the three CPI increases at ages 62-64 accumulate to 25% or more -- i.e., they averaged at least 7.8% each year -- they would more than offset the 20% reduction for early retirement, and the early retiree would be better off than the "normal" retiree.

Although the regular-minimum benefit is often described as if it were $122 in all cases, Table 3 shows otherwise. Workers retiring at age 64 or over before June 1981 received benefits for June 1980 through May 1981 based on a PIA of $153.10 under this provision; beginning June 1981, they were receiving benefits based on a PIA of $170.30. However, for persons retiring at age 62 in early 1981, their benefits were based on a PIA of $122.00 (increased to $135.70 for June 1981 and after).

As noted in Section A, at the end of July 1981, legislation which would make several significant changes in the regular-minimum provision was in the final stages of enactment. Under this legislation (the Omnibus Budget Reconciliation Bill), the regular-minimum PIA for those currently receiving such benefits and for all future beneficiaries would be eliminated. For such beneficiaries entitled under the law in effect before the 1977 Amendments and under the transitional-guarantee, the December 1978 AMW-PIA table would be proportionally extended below the minimums shown (AMW of $76, PIA of $121.80) by increments of $1 of AMW, and benefit tables for later years would be developed by applying the appropriate benefit increases to the December 1978 table. For such beneficiaries to whom the regular wage-indexed formula applies, the resulting wage-indexed PIA, without regard to any minimum, would be used to derive benefits.

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E. PIAs Without the Regular-Minimum-Benefit Provision

The number of quarters of coverage required for fully-insured status will be 40 for those attaining age 62 after 1990. The amount of earnings required for a quarter of coverage, which was set by law at $250 for 1978 and is increased automatically with increases in average wages, will eventually reach a level such that the minimum amount of earnings required for fully-insured status will produce a wage-indexed PIA larger than $122.

Table 4 presents the smallest PIAs that can be produced for age-62 retirees using the wage-indexed formula and ignoring the regular-minimum provision (frozen at $122). For 1979-81, actual amounts are shown; for future years, the amounts are projections based on the four alternative sets of assumptions in the 1981 Trustees Report. The regular-minimum PIA under present law will be exceeded by the wage-indexed formula PIA as early as 2013 (under the alternative III assumptions) and no later than 2017 (under the alternative I assumptions).

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F. Applicability of Transitional-Guarantee Method

Table 5 indicates the year-by-year earnings of hypothetical steady workers at three earnings levels -- low, average, and maximum. These hypothetical earnings histories are used to examine the applicability of the transitional-guarantee provision to steady workers.

Table 6 presents a comparision of PIAs for steady workers under the wage-indexed formula as against those under the transitional-guarantee provision. As discussed earlier, the withholding of CPI benefit increases after 1978 and before initial eligibility and the exclusion from the benefit computation of earnings in and after the year of first eligibility in transitional-guarantee cases result in smaller PIAs than under the wage-indexed formula in many instances. For these steady workers, the transitional-guarantee provision applies only to (a) those attaining age 62 in 1979, (b) average and maximum earners attaining age 62 in 1980 and retiring at age 62, and (c) maximum earners attaining age 62 in 1980 and retiring at age 63. In the other cases, the wage-indexed formula produces a larger PIA. In certain cases of low earnings, the special-minimum formula produces a PIA larger than either the wage-indexed formula or the transitional-guarantee, as indicated in the table.

Table 6 also includes a projection of the percentages of all new beneficiaries (including nonsteady earners) expected to receive benefits based on the transitional-guarantee provision. This projection is based on a sample of actual 1977 entitlements, from which 500 hypothetical earnings records were developed for each future year. One interesting result of this analysis is that the estimated proportion of beneficiaries receiving benefits based on the transitional-guarantee provision actually increases in the year following the year of initial eligibility (age 62). This phenomenon reflects the fact that many age-62 retirees have no recent earnings and, therefore, receive relatively more advantage from the indexing performed under the wage-indexed formula than from the transitional-guarantee provision. The majority of age-63 retirees, however, do have recent earnings and receive a larger benefit under the transitional guarantee. This effect also complicates interpretation of the data presented in Table 1.

Thus, the transitional-guarantee provision is expected to phase out rapidly insofar as its applicability to new retirees is concerned, other than those who attained age 62 in 1979. Those who attained age 62 in 1980 and who retire after 1981, and those who attain age 62 in 1981 and after, will not often find the transitional-guarantee provision to be advantageous.

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G. Long-Range Applicability of Special-Minimum Benefit

Table 7 presents an analysis of the special-minimum benefit provision with regard to its past and possible future applicability. Theoretically, the special-minimum PIA is available to a worker with as few as 11 "years of coverage" (as defined earlier). At present, however, until years of coverage substantially exceed 11, the amount of earnings required to receive a special-minimum PIA is sufficiently large that another PIA calculation method produces a larger benefit, or the regular-minimum provision supersedes the special-minimum. Thus, the special minimum is inapplicable except for cases with years of coverage significantly in excess of 11. For example, in early 1981, the regular-minimum PIA was as low as $122.00 (although, in some cases, it was as high as $153.10 --see Table 3), but the special-minimum PIA was less than this for all years-of-coverage categories up to 18 years (for which it was $115.70). The other effect -- i.e., the required amount of earnings for producing years of coverage resulting in a larger PIA under the regular benefit-computation methods than under the special-minimum PIA -- was not applicable in early 1981 (in cases where the regular-minimum PIA was less than the special-minimum PIA); however, this effect did occur in some past years (e.g., in early 1976, when the regular minimum produced a larger PIA than the special minimum only for 21 or less years of coverage, but the earnings requirements for years of coverage produced a larger PIA than the special minimum for 22-24 years of coverage) and will occur with increasing frequency in the future, as the regular-minimum PIA phases out relatively.

As shown in Table 1, the proportion of benefits actually awarded under the special-minimum provision has not exceeded 0.1% in recent years. If wages increase faster than prices in the future as expected (and as assumed under all long-range alternatives in the 1981 Trustees Report), the amount of earnings required to qualify for the special-minimum benefit will produce a larger PIA under the wage-indexed formula for more and more years-of-coverage groups. Eventually, as with the $122 frozen regular-minimum PIA, entitlement to a special-minimum PIA will be impossible. As Table 7 shows, this will occur in 1995 according to the economic assumptions in alternative I of the 1981 Trustees Report and in 2013 under alternative III.

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H. Applicability of Old-Start Method

The 1977 simplified old-start procedure will become inapplicable fairly soon, for several reasons. First, the method produces the largest PIA only in cases of substantial earnings before 1951. Second, for those initially eligible after 1978, this method is frozen -- i.e., earnings in and after the year of initial eligibility are excluded in the AMW computation -- the December 1978 benefit table is used to obtain the PIA at initial eligibility, and benefit increases are withheld for years after 1978 and before the year of initial eligibility. Third, the law [12/] states that, for those who attained age 22 after 1950, the old-start method applies only to those with at least one quarter of coverage before 1951, but with not more than 6 quarters of coverage after 1950. Because the fully-insured requirement (in the absence of a disability freeze) for such workers is 40 quarters of coverage, it will become increasingly unlikely that the old-start method will apply in future years.

I. Eventual Benefit Computation Methods

Some time early in the next century, depending on actual increases in average wages and prices, the wage-indexed formula under present law will be applicable to virtually all new awards. All workers (and their survivors) eligible for pre-1977 law benefits will be either already in current payment or deceased by then, as will also be the case for those eligible under three of the methods introduced in the 1977 Amendments, and for those eligible under the special minimum formula. New awards will thus be possible only under the wage-indexed formula and the rarely applicable disability guarantee.

12/ Social Security Act, Section 215 (d)(2)

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J. The "Notch" Situation Created by the 1977 Amendments

As discussed earlier, those workers with initial eligibility before 1979 have their benefits computed under the methods in use before enactment of the 1977 Amendments; those with initial eligibility in 1979 and thereafter have their benefits computed under the newer methods. Thus, in retirement cases (for which initial eligibility is defined as attainment of age 62), those attaining age 62 in December 1978 have benefits computed under a different method than do those attaining age 62 in January 1979. Because the transitional-guarantee and wage-indexed methods which apply to the latter group produce lower PIAs for steady workers (as defined earlier) than do the methods used previously, and because the 1977 Amendments provide for a gradual decrease in, and then a leveling off of, replacement rates so as to offset the unintended increases caused by the previous-law methods, the benefits for workers with identical retirement dates and earnings histories, but with birthdates differing slightly (by as little as one day), can vary considerably, producing the situation commonly known as the "notch".

Table 8 illustrates the actual and projected benefit amounts for such steady workers. The projections are based on the alternative II-B assumptions of the 1981 Trustees Report. The benefit amounts shown include the effects of actuarial reduction for retirement before age 65 and of the delayed-retirement credit for retirements after age 65. On each line of the table, the benefits shown are for workers with identical retirement dates and earnings histories. The dates of initial eligibility (attainment of age 62) range from December 1978 to January 1980.

The trend in benefit amounts follows a reasonably smooth and logical pattern for those attaining age 62 in January 1979, December 1979, and January 1980. For those attaining age 62 in December 1978, however, benefits are significantly larger than for those attaining age 62 in the following month. For retirement at age 65 in early 1982, this "notch" in benefits is about $88 per month in the average-earnings case ($623.70 minus $535.40) and about $111 per month in the maximum-earnings case ($789.90 minus $679.30). As indicated by the table, these differentials are even larger for retirements after age 65.

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Table 1

PERCENTAGE DISTRIBUTION OF AWARDS BY TYPE OF PIA CALCULATION, 1978-81 1/

Year	Pre-1977 Law	Special Minimum	Type of 1977 Law Benefit Calculation					
			Total	1977 Old-Start	Wage-Indexed	Regular Minimum	Transitional Guarantee	DIB Guarantee
Male Old-Age Beneficiaries								
1978	100.0%	0.0%	—	—	—	—	—	—
1979	73.0	0.0	27.0%	1.3%	11.8%	0.6%	13.3%	0.0%
1980	56.8	0.1	43.1	1.8	23.0	1.0	17.2	0.0
1981	45.0	0.1	54.9	2.0	33.0	0.8	19.1	0.0
Female Old-Age Beneficiaries								
1978	100.0%	0.0%	—	—	—	—	—	—
1979	58.0	0.0	42.0%	5.2%	14.2%	5.2%	17.5%	0.0%
1980	42.7	0.1	57.2	7.3	23.3	8.2	18.3	0.0
1981	34.4	0.1	65.5	7.6	32.5	7.5	17.9	0.0
Male Disabled-Worker Beneficiaries								
1978	100.0%	0.0%	—	—	—	—	—	—
1979	78.3	0.0	21.7%	0.7%	20.7%	0.2%	—	0.1%
1980	25.2	0.0	74.8	1.5	71.9	0.8	—	0.6
1981	10.1	0.0	89.9	1.2	87.0	1.1	—	0.6
Female Disabled-Worker Beneficiaries								
1978	100.0%	0.0%	—	—	—	—	—	—
1979	80.9	0.0	19.1%	3.0%	15.0%	1.1%	—	0.1%
1980	30.2	0.0	69.8	8.1	57.3	3.9	—	0.5
1981	13.8	0.0	86.2	8.3	72.6	4.8	—	0.5
Survivor Beneficiaries								
1978	100.0%	0.0%	—	—	—	—	—	—
1979	81.9	0.0	18.1%	0.5%	16.7%	0.8%	0.2%	0.0%
1980	70.6	0.1	29.3	0.8	26.8	1.3	0.4	0.0
1981	68.0	0.1	31.9	0.6	29.4	1.2	0.7	0.0

1/ 1981 figures are projected, based on first-quarter results.

Note: Dashes indicate that no awards of this type could occur.

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Table 2

ASSUMED BENEFIT INCREASE AND ANNUAL CHANGE IN AVERAGE WAGES, BY ALTERNATIVE 1/

Year	Alternative I		Alternative II-A		Alternative II-B		Alternative III	
	Change in Average Wages	Benefit Increase	Change in Average Wages	Benefit Increase	Change in Average Wages	Benefit Increase	Change in Average Wages	Benefit Increase
1981	10.64%	11.2%	10.22%	11.2%	10.23%	11.2%	11.49%	11.2%
1982	9.57	8.9	9.78	9.3	9.59	9.7	10.91	13.4
1983	9.08	7.2	8.64	6.6	9.73	9.2	11.11	11.4
1984	7.64	5.5	7.90	5.8	8.80	8.5	11.43	11.0
1985	6.77	4.5	7.10	4.9	8.11	7.7	10.07	10.1
1986	6.15	3.6	6.96	5.5	7.31	6.9	9.31	9.2
1987	5.52	*	6.63	4.0	6.79	6.1	9.20	8.8
1988	5.08	4.9	5.72	3.5	6.17	5.3	9.98	8.3
1989	4.85	*	5.20	3.0	5.47	4.5	8.56	8.0
1990	4.63	4.0	5.10	3.0	5.39	4.0	8.20	7.5
1991	4.50	2.0*	5.00	3.0	5.50	4.0	7.90	7.1
1992	4.50	2.0*	5.00	3.0	5.50	4.0	7.60	6.7
1993	4.50	2.0*	5.00	3.0	5.50	4.0	7.20	6.3
1994	4.50	2.0*	5.00	3.0	5.50	4.0	6.80	5.9
1995	4.50	2.0*	5.00	3.0	5.50	4.0	6.40	5.5
1996	4.50	2.0*	5.00	3.0	5.50	4.0	6.00	5.1
1997 and later	4.50	2.0*	5.00	3.0	5.50	4.0	6.00	5.0

* For 1987 and 1989, benefit increases are not activated, due to 3-percent trigger in the automatic provisions. For 1991 and later, benefit increases are assumed to disregard the trigger and equal 2.0 percent.

1/ From the 1981 OASDI Trustees Report.

Table 3

REGULAR-MININUM PIA BY YEAR OF RETIREMENT AND AGE AT RETIREMENT 1/

Retirement in January of	Age at Retirement 62	63	64	65
1979	$122.00	$121.80#	$121.80#	$121.80#
1980	122.00	133.90*	133.90#	133.90#
1981	122.00	139.30*	153.10*	153.10#
1982	122.00	135.50*	155.00*	170.30*
1983	122.00	133.70*	148.70*	170.10*
1984	122.00	132.20*	146.10*	162.40*
1985	122.00	122.00	143.50*	158.60*
1986	122.00	122.00	122.00	154.60*
1987 and later	122.00	122.00	122.00	122.00

* Based on transitional guarantee.
\# Based on pre-1977 law.

1/ Based on alternative II-B assumptions of the 1981 OASDI Trustees Report (see Table 2).

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Table 4

SMALLEST ACTUAL AND PROJECTED PIA'S FOR AGE-62 RETIREES WITHOUT REGARD TO REGULAR-MINIMUM PIA 1/

Year	PIA			
Actual:				
1979		$5.40		
1980		5.40		
1981		6.30		
Projected:	Alt.I	Alt. II-A	Alt. II-B	Alt. III
1982	$ 6.30	$ 6.30	$ 6.30	$ 6.30
1983	7.20	7.20	7.20	7.20
1984	8.10	8.10	8.10	8.10
1985	9.00	9.00	9.00	9.90
1990	12.60	13.50	13.50	15.30
1995	16.20	17.10	18.00	23.40
2000	19.80	21.60	23.40	31.50
2005	25.20	27.90	30.60	42.30
2010	45.00	50.40	57.60	81.00
2015	101.70	117.00	*	*
Year when projected amount first exceeds $122	2017	2016	2015	2013

* Greater than regular-minimum PIA of $122.

1/ Assumes no earnings prior to 1951, or age 22 if later, and no period of disability.

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Table 5

EARNINGS OF HYPOTHETICAL LOW, AVERAGE, AND MAXIMUM STEADY EARNERS

Year	Annual Earnings 1/		
	Low	Average	Maximum
1951	$1,560.00	$2,799.16	$3,600.00
1952	1,560.00	2,973.32	3,600.00
1953	1,560.00	3,139.44	3,600.00
1954	1,560.00	3,155.64	3,600.00
1955	1,560.00	3,301.44	4,200.00
1956	1,993.00	3,532.36	4,200.00
1957	2,080.00	3,641.72	4,200.00
1958	2,080.00	3,673.80	4,200.00
1959	2,080.00	3,855.80	4,800.00
1960	2,080.00	4,007.12	4,800.00
1961	2,184.00	4,086.76	4,800.00
1962	2,392.00	4,291.40	4,800.00
1963	2,461.00	4,396.64	4,800.00
1964	2,600.00	4,576.32	4,800.00
1965	2,600.00	4,658.72	4,800.00
1966	2,600.00	4,938.36	6,600.00
1967	2,886.00	5,213.44	6,600.00
1968	3,293.00	5,571.76	7,800.00
1969	3,328.00	5,893.76	7,800.00
1970	3,328.00	6,186.24	7,800.00
1971	3,328.00	6,497.08	7,800.00
1972	3,328.00	7,133.80	9,000.00
1973	3,328.00	7,580.16	10,800.00
1974	3,883.00	8,030.76	13,200.00
1975	4,368.00	8,630.92	14,100.00
1976	4,784.00	9,226.48	15,300.00
1977	4,784.00	9,779.44	16,500.00
1978	5,512.00	10,556.03	17,700.00
1979	6,032.00	11,479.46	22,900.00
1980	6,448.00	12,454.00	25,900.00
1981	6,968.00	13,729.00	29,700.00
1982	7,635.92	15,045.00	32,100.00
1983	8,378.96	16,509.00	35,400.00
1984	9,115.90	17,961.00	38,700.00
1985	9,855.39	19,418.00	42,600.00

1/ Average earnings are actual through 1979, as published in the Federal Register, as used by the Social Security Administration for wage indexing of earnings records. Average earnings for 1980 and later are projected on basis of Alternative II-B assumptions of 1981 Trustees Report (see Table 2).

Maximum earnings are actual maximum covered earnings through 1981 and are projected thereafter by the automatic-adjustment provisions and the assumed increases in average earnings.

Low earnings are based on 2,080 hours at the Federal minimum wage through 1981 and are projected thereafter by the rate of increase in average earnings growth.

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Table 6

ACTUAL AND PROJECTED PIA'S AT AWARD FOR HYPOTHETICAL OLD-AGE BENEFICIARIES WITH STEADY EARNINGS, AND PERCENTAGE OF OLD-AGE BENEFICIARIES WITH TRANSITIONAL GUARANTEE PIA 1/

Year of Retirement	Age at Retirement	Low Earner 2/		Average Earner 2/		Maximum Earner 2/		Percentage with Transitional Guarantee 3/
		Worker Attaining Age 62 in January 1978 (Pre-1977 Law)						
1978	62	233.50		352.60		443.20		
1979	63	256.50		288.20		491.20		
1980	64	291.20		445.20		565.70		
1981	65	345.70		532.80		677.00		
		Wage Indexed	Transitional Guarantee	Wage Indexed	Transitional Guarantee	Wage Indexed	Transitional Guarantee	
		Worker Attaining Age 62 in January 1979						
1979	62	$ 453.10	$ 486.10*	$ 365.90	$ 383.10*	$ 245.90	$ 254.30*	54%
1980	63	505.20	534.30*	404.30	421.10*	271.70	279.50*	79
1981	64	587.30	610.80*	466.20	481.40*	313.00	319.50*	64
1982	65	667.20	679.30*	524.70	535.40*	351.10	355.50*	50
		Worker Attaining Age 62 in January 1980						
1980	62	$ 492.80	$ 503.40*	$ 394.80	$ 395.30*	$ 265.20*	$ 262.10	29%
1981	63	571.70	575.40*	453.80*	451.90	304.70*	299.60	49
1982	64	647.30*	639.90	509.20*	502.60	341.20*	333.20	15
1983	65	724.50*	702.00	565.90*	551.40	378.00*	365.60	9
		Worker Attaining Age 62 in January 1981						
1981	62	$ 540.00*	$ 521.70	$ 429.30*	$ 405.60	$ 287.90*	$ 267.40	7%
1982	63	609.90*	580.20	480.30*	451.10	322.00*	297.40	6
1983	64	680.60*	636.50	531.50*	494.90	355.60*	326.30	0
1984	65	758.10*	695.10	587.80*	540.50	392.20*	356.40	2
		Worker Attaining Age 62 in January 1982						
1982	62	$ 590.70*	$ 540.50	$ 466.00*	$ 417.60	$ 312.10*#	$ 272.90	3%
1983	63	657.60*	593.00	514.40*	458.20	344.20*#	299.40	1
1984	64	730.30*	647.60	566.70*	500.40	378.50*#	327.00	0
1985	65	907.50*	702.70	622.10*	543.00	414.50*#	354.80	1
		Worker Attaining Age 63 in January 1983						
1983	62	$ 655.90*	$ 559.30	$ 514.10*	$ 435.00	$ 343.90*#	$ 280.70	1%
1984	63	726.10*	610.80	564.30*	475.10	377.30*#	306.60	1
1985	64	800.50*	662.80	617.30*	515.50	412.00*#	322.70	0
1986	65	878.00*	713.90	672.10*	555.20	447.50*#	358.40	0

* This PIA is higher.
\# Special minimum PIA is even higher for these workers ($321.40 in 1982, $352.60 in 1983, $385.10 in 1984, $417.90 in 1985, and $450.10 in 1986).

1/ Based on alternative II-B assumptions of the 1981 OASDI Trustees Report (see Table 2).
2/ Low, average, and maximum earnings are described in footnote 1 of Table 5.
3/ Based on sample of retirees reflecting actual (non-steady) earnings patterns. The percentage shown is based only on awards that are either wage-indexed or transitional-guarantee PIAs—i.e., regular minimum, special minimum, and old-start PIAs are not reflected.

Table 7

ACTUAL AND PROJECTED MINIMUM NUMBER OF YEARS OF COVERAGE 1/
REQUIRED FOR SPECIAL-MINIMUM PIA PROVISION TO APPLY TO
AGE-62 RETIREES 2/

Year	Number of Years of Coverage			
Actual:				
1973	23(20)			
1974	23(20)			
1974*	22(20)			
1975	23(21)			
1976	24(22)			
1977	26(22)			
1978	26(23)			
1979	23(21)			
1980	21(20)			
1981	19(19)			
Projected:	Alt.II	Alt. II-A	Alt. II-B	Alt. III
1982	18(18)	18(18)	18(18)	18(18)
1983	17(17)	17(17)	17(17)	17(17)
1984	17(17)	17(17)	17(17)	16(16)
1985	17(17)	17(17)	16(16)	16(16)
1990	27	26	21	20
1995	#	30	26	24
2000	#	#	28	26
2005	#	#	#	28
2010	#	#	#	29
Year special minimum first inapplicable	1995	1997	2005	2013

* Effective in March 1974, when dollar amount per year of coverage was increased to $9.00.

\# Special-minimum PIA provision is inapplicable.

1/ As defined for special-minimum PIA: year with earnings of at least 25 percent of the earnings base during 1951-78 and 25 percent of the "old-law" base for years after 1978. For earnings before 1951, one year of coverage for each $900 of cumulative 1937-50 earnings, up to a maximum of 14 years of coverage.

2/ Assumes no earnings prior to 1951, or age 22 if later, and no period of disability.

Note: Figures in parentheses are minimum number of years of coverage required before special-minimum PIA is greater than regular-minimum PIA. Such figures are not given when wage-indexed method produces PIA greater than the special-minimum.

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Table 8

ACTUAL AND PROJECTED BENEFITS 1/ AT AWARD FOR HYPOTHETICAL OLD-AGE BENEFICIARIES WITH STEADY EARNINGS, FOR RETIREMENT IN JANUARY OF 1980-84 FOR SELECTED MONTHS OF AGE-62 ATTAINMENT 2/

Retirement in January of	Date of Attainment of Age 62			
	December 1978	January 1979	December 1979	January 1980
		Low Earner 3/		
1980	$ 254.00	$ 242.30	$ 225.20	$ 212.20
1981	324.60	298.20	278.70	264.10
1982	400.10	355.30	333.60	318.50
1983	459.10	401.90	391.10	378.00
1984	534.00	458.70	437.40	430.40
		Average Earner 3/		
1980	$ 388.90	$ 365.00	$ 339.30	$ 316.30
1981	500.30	449.40	419.90	393.30
1982	623.70	535.40	502.70	475.30
1983	731.60	605.10	588.90	565.90
1984	836.80	691.50	659.40	646.60
		Maximum Earner 3/		
1980	$ 493.50	$ 463.10	$ 430.50	$ 402.80
1981	635.70	570.10	532.80	498.70
1982	789.90	679.30	637.80	604.20
1983	920.00	771.60	751.00	724.50
1984	1065.70	890.00	848.70	833.80

1/ Amounts shown include any actuarial reduction or delayed-retirement credit, if applicable.
2/ Based on alternative II-B assumptions of the 1981 OASDI Trustees Report (see Table 2).
3/ Low, average, and maximum earnings are described in footnote 1 of Table 5.

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